

What is claimed is:

1. A bluetooth earphone module with audio player function, comprising:

a DSP unit processing a digital signal;

5 a bluetooth module receiving a remote data signal and replying with a modulation signal;

a voice transmission and encoder/decoder unit connected to the DSP unit and the bluetooth module for encoding/decoding voice and converting digital/analog messages;

10 an audio player decoder connected to the DSP unit for decoding the audio player file into a voice signal;

a voice output unit connected to the voice transmission and encoder/decoder unit and the audio player decoder; and

a microphone connected to the voice transmission and encoder/decoder unit.

15 2. The bluetooth earphone module of claim 1, wherein a memory unit is connected to the DSP unit for storing the digital data.

3. The bluetooth earphone module of claim 2, wherein the memory unit is a flash memory.

20 4. The bluetooth earphone module of claim 1, wherein an input unit is connected to the DSP unit for controlling the DSP unit with a control signal.

5. The bluetooth earphone module of claim 1, wherein the voice output unit is

an earphone.

6. The bluetooth earphone module of claim 1, further comprising an ancillary earphone connected to the voice transmission and encoder/decoder and the audio player decoder.

5 7. The bluetooth earphone module of claim 1, further comprising a reader unit connected to the DSP unit and a memory card, and controlled by the DSP unit for accessing the digital data of the memory card.

8. The bluetooth earphone module of claim 7, wherein the memory card is removably connected to the reader unit.

10 9. The bluetooth earphone module of claim 7, wherein the memory card is a flash memory.

10. The bluetooth earphone module of claim 7, wherein the memory card is an MS (Memory Stick) card, a CF (Compact Flash) card, an SMC (Smart Media) card, an MMC (Multi Media) card or an SD (Secure Digital) card.